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Identification of Variables Predictive of Payment in Full of Third Party Outpatient Claims

A Graduate Management Project
Submitted to the Faculty of
Baylor University
In Partial Fulfillment of the
Requirements for the Degree

Master of Health Administration

of

by

Lieutenant Leslie A. Moore, MSC, USN, CHE
May 1996

Third Party Collections

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ABSTRACT

The purpose of this study was to determine, using multiple discriminant analysis, the effects of the predictor variables, CPT (grouped to make visit type) codes, specific third party payers, and the number of claims, on payment in full of third party outpatient billings at Naval Medical Center San Diego, for fiscal year 1994.

Two random samples were extracted from the Third Party Collection database. One sample (N=147) consisted of those bills which were paid in full; the other (N=150) was made up of those bills which were not paid in full. Discriminant function analysis was used to distinguish among the groups, based on the predictor variables. Stepwise multiple regression was then employed to determine the contribution of the variables to payment in full.

Results of the study indicate that the third party payer is a significant predictor of payment in full. However, nearly 77 percent of the claims not paid in full are due to deductibles which have not been met and require copayments; both are situations over which military treatment facilities have no control.

The main implication of this study is that particular third party payers are more likely than others to pay a claim in full. The relationships with these payers should be cultivated in an attempt to recoup as much outpatient visit charges as possible. All facility staff coming into contact with patients must maintain a conscientious effort to identify patients with third party payers. Further, the staff must ensure maximum compliance with the Third Party Program initiatives in order to collect whenever the opportunity is present.

I. INTRODUCTION

Conditions That Prompted the Study

Post-cold war military planning called for a reduction in the size of the uniformed forces in an effort to reduce spending. Resultingly, the military is facing a 25 percent overall reduction in personnel, increasing costs, and tighter budgets, but only a nine percent reduction in beneficiaries (Southby, 1993). In June 1994, approximately 8.6 million people were eligible for medical care - 1.9 million active-duty members and 6.7 million nonactive-duty beneficiaries (Baine, Backhus, Williams, and Weldon, 1994).

In an effort to confront the significant changes and challenges taking place, the Department of Defense's (DoD) military health care system is developing and implementing several initiatives aimed at cutting costs without cutting services. This is a daunting challenge as the DoD is both one of the nation's largest health care providers as well as a payer for care for millions of military beneficiaries (Baine, 1991). One area which allows the DoD health

care system to recapture dollars for services rendered, is third party insurance recovery.

Title 10 United States Code, Section 1095, amended in 1991 authorizes the DoD hospitals to bill private insurance companies for health care services provided to uniform services dependents and retirees. The program is designed to bring in additional revenues to the hospital without any additional charges being incurred by our beneficiaries. Patients are not required to pay any deductibles or copayments and all additional revenues will come solely from the private health insurance companies.

Under the Medical Care Recovery Act (MCRA), Title 42 United States Code, Sections 2651-2653 and Title 10 United States Code, Section 1095, amended in 1990, the Department of Defense is entitled to recover the reasonable cost of medical treatment provided to its' beneficiaries for injuries or illnesses caused by the negligence of another individual. The MCRA Claims Division of the Naval Legal Service Office is responsible for pursuing these claims on behalf of the medical treatment facilities. All medical costs recovered by the Naval Legal Service Office are

returned to the military treatment facility (MTF) which provided the care.

In accordance with Title 10, United States Code, Section 1095, amended in 1991, as well as various military instructions/regulations, Military Treatment Facilities are not only authorized, but mandated to bill commercial, private insurance companies for health care these facilities provide to uniformed services beneficiaries (Department of Defense, 1993; Department of the Navy, 1993; Department of the Navy, 1994).

Further, it is the policy of the Department of Defense to collect from third party payers to the fullest extent allowed by law (Department of Defense, 1993).

The Consolidated Omnibus Budget Reconciliation Act of 1986 (COBRA) authorized collection for reasonable health care costs incurred by many military health care beneficiaries. In 1986 the program was called "Coordination of Benefits," and allowed only for collection against inpatient care. At that time, the law required that funds billed by the MTF for insurance coverage be deposited to the U.S. Treasury. Six years later, outpatient care became reimbursable.

Collection for outpatient visits became effective on 1 October 1992 and presently, the law allows collected funds to be returned to the Operating and Maintenance, Navy (O&M,N) accounts of the MTF providing the treatment, instead of the U.S. Treasury, as was the previous practice.

Naval Medical Center San Diego (NMCSD) opened its business office in 1992 (fiscal year 1993) and began billing for outpatient services that same year.

Outpatient collections for the first year were \$215,101.44 (Washington, 1995). By fiscal year 1994, the Third Party Collections Program, as the revamped program is called, was well underway. Despite the efforts of the staffs of both the clinics and the business office, payment in full of a bill for an outpatient clinic visit was poor; only 12.6% of outpatient bills collected payment in full. In contrast, 34.6% of the same day surgery bills were paid in full. Thus, the impetus for this study.

Statement of the Problem

No one at Naval Medical Center San Diego has studied the factors contributing to payment in full of

submitted claims, rather, the effort has been to increase the number of claims submitted on the whole.

With the hospital's operating budget being decremented to offset the expected income from third party collections, the hospital cannot afford to settle for less than payment in full whenever possible. If there are changes which can be implemented to increase the success rate of payment in full, the staff of the Third Party Collection Program must attempt to identify and target them. If there are indeed predictor variables, they can be more closely scrutinized in an attempt to increase the collection rate and thus provide more money to contribute to mission achievement.

Literature Review

Currently, the United States spends nearly 14

percent of the nation's Gross Domestic Product on

health care - a fair amount above that of some other

countries. Comparatively, in 1991, when Americans

spent 13.4 percent, Canadians, Germans, and the

Japanese spent 10 percent, 8.5 percent, and 6.6 percent

respectively (Davis, 1995). Meanwhile, the national

spending for health care in this country grew an average of 12.4 percent per year from 1970 to 1991 (Knickman and Thorpe, 1995). Further, our expenditure is projected to increase to 18 percent by the close of the century (Davis, 1995).

Just what is known about the American population in terms of health insurance? We know that approximately 14 percent of all Americans are uninsured. We also know that about half of the uninsured remain so for at least two years and that only 7 percent of the uninsured are uninsured by choice. Since employers tend to be our link with health plans, one might be surprised to learn that 84 percent of all of the uninsured are employed full- or part-time for at least part of the year (Davis, 1995). Part of this figure can be explained by the estimate that about 51 percent of the uninsured work for a firm which does not provide insurance (Morrisey, Jensen, and Morlock, 1994).

Estimates on the government's share of health expenditures vary. Some estimate that more than half of health care expenditures are historically borne by the government (Data Line, 1990), where as others put

it slightly lower at 43 percent (Knickman and Thorpe, 1995). Most agree, however, that the majority of private health care remunerations come from either private insurers or the individuals receiving treatment (Data Line, 1990) (Knickman and Thorpe, 1995). Just what kinds and types of health insurance exist, how does one obtain coverage, and how does health insurance operate?

The first "sickness" insurance appeared in 1847, but the insurance industry paid very little attention to health insurance until after World War II (Rakich, Longest, and Darr, 1992). The original policies were basically add-ons on accident insurance policies and were intended mainly to facilitate the replacement of lost income (Health Insurance Institute, 1975).

When Blue Cross began operations in the 1930s, it provided what was called a "service" benefit for hospital care. Under such a plan, the company totally reimbursed the hospital for a patient's stay (up to a maximum period). The patient did not share in any of the cost. This approach pleased the hospitals because they were fully reimbursed and patients had no incentive to shop for a less expensive hospital.

However, such a plan also encouraged hospital inpatient care, rather than another less expensive but equally appropriate care setting, because it only paid for hospital provided care (Feldstein, 1993); today, outpatient care is the preferred method of health care delivery.

Much of inpatient care has given way to ambulatory care (Lobas, Lepinski, and Abramowitz, 1992). Quite often an ambulatory care encounter is the first contact a patient has with the health care system and it is often the point of contact for continuing care.

Ambulatory Care

Ambulatory care consists of a large range of services which can be provided to patients who do not have to be hospitalized. The care can range from treating a common cold to providing surgical services. In fact, by 1990 ambulatory surgery accounted for just over half of the procedures performed in hospitals. In that year, there were 11.1 million in-hospital procedures performed and another 2.3 million performed in ambulatory surgery centers (Mangano, 1993).

Stand-alone ambulatory surgery centers have proven themselves to be cost-effective, with facility fees

running about half of those in a hospital setting
(Vaughan, Aluise, and McLaughlin, 1991). Part of this
reduced cost results from the care setting. Ambulatory
care can be provided in a variety of settings from
patients' homes to traditional hospital settings - with
many alternatives in between.

Outpatient care has become so prevalent that ambulatory care is currently the only growth area among hospital-based services. Hospital outpatient visits now outnumber the acute care inpatient days in this country. The American Hospital Association reports that ambulatory care providers, in a free-standing setting, doubled between 1980 and 1990. And, total hospital outpatient revenue went from 12 percent in 1983 to 33 percent in 1992 - this number is expected to grow to 50 percent by the year 2000 (McGuire, 1994). Most people pay for this care through some form of insurance.

Kinds of Insurance

Other than self-insurance, where one pays for all health care entirely from one's own funds, there are three ways to obtain health insurance: belong to a group plan, pay premiums for an individual plan, or

enroll in a prepaid health plan. A group plan is one where a group of employees or some other homogeneous group, like members of a professional organization, is insured under a single policy issued to the employer, with individual certificates given to each insured individual or family.

Generally, a group policy provides better benefits and lower premiums than does an individual policy. If the policy has that which is called a conversion privilege, the member may convert to an individual policy if the member leaves the employer or organization. Normally, with a conversion, the premium is increased and the benefits lowered. However, if the individual has developed a condition which would preclude the member from getting other coverage, or would be considered a high risk to insurers, conversion is still a good idea because no physical is required, therefore a pre-existing condition cannot be excluded.

An individual plan is one which is issued to the individual and any dependents. This kind of insurance tends to be quite expensive and has somewhat lower benefits than in a group policy. Sometimes this kind of policy is also referred to as personal insurance.

A prepaid health plan is a program in which a group of enrolled beneficiaries pay fixed periodic payments. The health care services are then provided by a group of participating physicians. A health maintenance organization, which delivers care on a capitated basis, rather than fee-for-service, is an example of this kind of program.

Types of Insurance

There are many types of insurance coverage which fall under the three kinds described above. A wide range of insurance policies can be purchased; from life insurance to aviation trip insurance and most anything in between.

Commercial insurance is provided mostly to groups of employees as part of fringe-benefits packages. One example of commercial insurance is what is commonly referred to as 'The Blues'; Blue Cross and Blue Shield. Blue Cross mainly offers hospitalization coverage. Blue Shield, on the other hand, mostly offers insurance for physician's services in an inpatient setting with a limited amount of office-based care coverage (Knickman and Thorpe, 1995).

Comprehensive major medical insurance is one which offers the protection of both a basic and major medical health insurance policy. Major medical expense insurance is one in which the expense of major illnesses or injuries are financed. Major medical expense insurance, like many other types of insurance, usually includes a deductible.

Deductibles and Coinsurance

A deductible is an amount which the insured must pay before the insurer will assume any liability for any remaining costs of covered services. For example, a \$100 deductible requires that a beneficiary pay \$100 toward his individual care before benefits will be paid for his claims. Deductibles typically range between \$100 and \$300 (Kongstvedt, 1995). A deductible differs from coinsurance or cost sharing.

Coinsurance is basically a cost-sharing requirement under a health insurance policy that provides that the insured will assume a percentage of the costs of covered services. Typically the insurance company will assume 80% of the bill with the remainder to be paid by the beneficiary (Kongstvedt, 1995). More than half of all group/staff health maintenance

organizations require copayments for their providers' services (Marmor, 1994). Both deductibles and coinsurance are factors that play a big part in reimbursements; so does coding.

Coding

Coding is the process of transferring the narrative description of diseases, injuries, and procedures into numeric designations. The American Medical Association publishes a book each year containing the five digit codes. It is a systematic listing and coding of procedures and services performed by physicians ("CPT '95," 1994). This process has been taking place since 1966 (Zuber and Henley, 1992), but in the past ten years, it has become significant in determining hospital payment.

Before the prospective payment system was implemented, International Classification of Diseases, 9th Edition, Clinical Modification (ICD-9-CM) codes that had been previously recorded, were used to determine the DRG reimbursement system. This was a foreshadowing of the use of today's ICD-9-CM and Current Procedural Terminology (CPT) data to determine ambulatory surgery and physician's services in the

future. In the outpatient setting, a prospective payment system is in development.

It is expected that a combination of Ambulatory
Patient Groups and the Product of Ambulatory Care will
be used to define the amount and type of resources
used. In general, where coding is concerned, to get
the highest reimbursement, coding must be accurate as
the most specific code results in the highest payment
(Kost, Muller, and Smith, 1993).

Hospitals, like any other viable business entity, must be able to capture the use of its services so that a charge can occur. With health insurance, once the use itself is captured, certain processes must take place before a billing can take place. In particular, a third-party payer's requirements for documentation and procedure coding, as previously detailed, must be satisfactorily accomplished in order to avoid payment delays or even worse, denials (Thompson and Barrett, 1993).

Currently, the typical private provider can expect to receive only 80 percent of the billed fee for an office visit. Not surprisingly, the fees are characteristically highest in the West and lowest in

the Midwest. In the West, the typical fee for a new patient's office visit is \$120 and \$95 for the Midwest patient (Crane, 1995).

Purpose, Objectives, and Working Hypotheses

The purpose of this study is to determine the relationship between specific groups of CPT (visit type) codes specific third party payers, the number of claims and payment in full of the third party outpatient billings at Naval Medical Center San Diego for fiscal year 1994.

The objective of this study was to determine whether or not there are particular variables which are more predictive than others of payment in full. An initial milestone en route to this objective, was a full literature review with regard to outpatient care in the areas of insurance, various types of coverage, and the billing and reimbursement of claims.

Upon meeting the forgoing objective and associated milestones, another objective was to develop, explore, and present any possible recommendations to enable the facility to maximize the potential for full reimbursement of third party outpatient care claims.

HO₁: There is no systematic relationship between payment in full and visit type code.

HA₁: A systematic relationship between payment in full and visit type code does exist.

HO₂: There is no systematic relationship between payment in full and the number of claims submitted.

HA₂: A systematic relationship between payment in full and the number of claims submitted does exist.

 HO_3 : There is no systematic relationship between payment in full and the third party payer.

 ${\rm HA_3}$: A systematic relationship between payment in full and the third party payer does exist.

II. Method and procedures

Population

The first step in the study was to gather the people, objects, and events to be studied. In order to determine the relationship between the visit type codes, third party payers, number of claims and payment in full status, a retrospective analysis of a twelve-

month period (fiscal year 1994), of outpatient collections was conducted. The Business Office, which is part of the Fiscal Department, maintains an appropriate database, Third Party Outpatient Collections (TPOC), and a twelve-month period constituting fiscal year 1994 is available.

The database was scrutinized to ensure records with identifiable errors or disqualifying data were not used. Excluded were those records not within the specified time frame. Additionally, those records which did not contain all the required data were excluded as were those which contained conflicting data. One example of conflicting data was where within a single claim, one transaction code reflected a write-off due to a remaining deductible for the patient, and a subsequent write-off transaction code reflected a code which indicated the patient was not covered by the policy; an impossible combination.

Once the screening of the database was completed, the remaining records of the bills generated for outpatient treatment in fiscal year 1994 were reviewed and provided the people, objects, and events for this study.

The database field "Transaction Control Number" was used to identify particular events. Use of this field allowed for complete patient confidentiality as no identifying patient information was used in its formation.

Operationalization of Variables

The dependent variable (Y) was payment in full; the payment received from the third party payer had to be for the full amount billed. Payment in full was a dichotomous variable. There were three independent variables (X).

The <u>visit type</u> code consisted of groups of CPT codes as arranged on various Superbills in use throughout the various services within the facility. A sample Superbill is included as Figure 1.

Additionally, various CPT codes were derived from the American Medical Association's CPT Code Book and grouped according to specialty. This variable was coded as categorical.

The <u>third party payer</u> associated with each claim and to whom the claim was sent. Third party payer was a categorical variable.

The <u>number of claims</u> submitted to a particular third party payer, on behalf of a specific beneficiary; this was a continuous variable.

The three control variables consisted of: the patient category; retiree, active duty member's family member, or retiree's family member; the age of the patient; and, the gender of the patient.

The variable gender was coded as a dichotomous variable. The variable age was a continuous variable, and patient category was categorical.

The hypothesized functional relationship was:

$$Y = f(X_1, X_2, X_3, X_4, X_5, X_6)$$

where

Y = Payment in Full

X, = Number of Claims Submitted

 X_2 = Visit Type Code

 $X_3 = Gender$

 X_{L} = Patient Category

 X_5 = Third Party Payer

 $X_6 = Age$

Statistical Methodology

Discriminant function analysis (logistical regression) was used to distinguish among the groups, based on the predictor variables. The purpose of using this technique is to allow one to determine which predictors will most clearly distinguish among the given groups. The technique points out the factors most related to the various groups and how well group membership can be predicted (Munro and Page, 1993).

From the population (N=3,942), two groups were formed; paid in full (N=997) and not paid in full (N=2,945). A random sample of 150 transactions (every 20th record) was selected from the not paid in full group and a sample of 142 (every seventh record) was selected from the paid in full group.

Each of the non-continuous variables were recoded (dummy coding 0,1) so as to not give unequal amounts of weight based on the respective categorical designation. For example, seven groups of third party payers were used, one through six being specific payers, with the seventh being a group of all others. The group designated as "6" had no greater weight than group "1" once recoding was accomplished.

Stepwise multiple regression was then utilized to test the effects of individual independent variables while controlling for the effects of the others upon the dependent variable.

The full regression model equation used follows:

Y = a₀U + b₁Number of Claims +
b₂Radiology Procedure +
b₃Outpatient Consultation
+ b₄Inpatient Consultation
+ b₅Office Visit for Established
Patient + b₆Office Visit for New
Patient + b₇Dept of Medicine +
b₈Emergency Dept Services + b₉Case
Management + b₁₀Surgery Department
+ b₁₁Gender + b₁₂Retiree + b₁₃Family
Member of Retiree + b₁₄Family
Member of Active Duty + b₁₅APWU +
b₁₆BC FEP + b₁₇BS PERS CARE +
b₁₈CIGNA 1620 + b₁₉GEHA + b₂₀MAIL +
b₂₁ALL OTHERS + b₂₂Age

Reliability and Validity

The reliability of this study is very much dependent upon the data provided by the business office. It is assumed that the data was coded and recorded correctly by the coders and the billers and entered correctly by data entry personnel.

The validity of the dependent variable, payment in full, was measured by the correlation coefficient.

III. Results

Descriptive Statistics

The descriptive statistics for this study are at Table 1. The critical value (2 tail, .05) was +/- .113. Two variables had correlations that exceeded the critical value and were positive: BC FEP (.431), and age (.422). Five variables had correlations that exceeded the critical value and were negative: BS Pers Care (-.115), Cigna 1620 (-.128), Mail (-.281), the group of all Other (-.244) third party payers, and Active Duty Family Member (-.135). The remainder of the variables did not meet the critical value and were eliminated from further consideration and analysis.

Inferential Statistics

The inferential statistics for this study may be found at Table 2. The eight remaining variables used in the final multiple regression subset model accounted for 37.8 percent of the variance of payment in full of third party outpatient billings. The subset model was as follows:

Model

Step #8

Equation

 $Y = a_0U + b_{22}Age + b_5Office Visit$ for an Established Patient + $b_{10}Surgery Department + b_{16}BC$ FEP + $b_{19}GEHA + b_{20}MAIL + b_{21}ALL$ OTHERS + $b_{14}Family Member of$ Active Duty

Acceptance/Rejection of Hypotheses

HA₁: A systematic relationship between payment in full and Visit Type code does exist. This hypothesis is rejected; in our sample a statistically significant relationship between a Visit Type Code and payment in full was not found.

HA2: A systematic relationship between payment in full and the number of claims submitted does exist.

This hypothesis is rejected; in our sample a statistically significant relationship between the number of claims and payment in full was not found.

 ${\rm HA}_3$: A systematic relationship between payment in full and the third party payer does exist. This hypothesis is accepted.

IV. Discussion

The purpose of this study was to determine, using multiple discriminant analysis (logistical regression), the effects of the predictor variables, CPT (visit type) codes, specific third party payers, and the number of claims, on payment in full of third party outpatient billings at Naval Medical Center San Diego, for the fiscal year 1994.

The expected result was that at least one of the variables would be a significant predictor of payment in full of third party payer outpatient claims. If such a relationship could be established, the identified predictor(s) could be scrutinized and targeted to maximize the likelihood that payment in

full for third party payer outpatient claims will be received. This study was conducted at a large (>350 bed) military treatment facility and may have implications for other similar military medical treatment facilities.

Analysis of Hypotheses

HA1: A systematic relationship between payment in full and visit type code does exist. This hypothesis is rejected. A limited number of CPT codes were entered onto the bills; the vast majority of bills contained only one code. Compounding this limited variability of codes is the fact that the most frequently utilized third party payer, BC FEP, has requested the billing office enter only "00000" in place of a CPT code. According to the billing office, the payer is not interested in the CPT code since the billing is a flat amount, no matter the code.

HA₂: A systematic relationship between payment in full and the number of claims does exist. This hypothesis is rejected. The mean age for patients paying in full is more than 73 years (73.415); for non payment in full, almost 60 years (69.640). It was

expected that this variable would be statistically significant. It was anticipated that older patients would have more visits. Thus, the patient would have likely fulfilled any deductible and then incurred fully reimburseable visits. However, this was not the case and with the mean number of claims between five and six (5.732) for both paid and not paid in full, the number of visits was lower than theorized.

HA3: A systematic relationship between payment in full and third party payer code does exist. This hypothesis is accepted, F (19, 272) = 9.01, p<.001. This variable accounts for 16 percent of the variability of payment in full. This indicates a certain percentage of claims will always remain not paid in full. Not only does the particular carrier impact on this variable, but also the type of coverage; some policies are limited to 80 percent payment.

Age as a Significant Correlation

Age. This variable has a statistically significant correlation, \underline{F} , (1, 290) = 62.84, \underline{p} <.001. Age accounts for almost 18 percent (.178) of the variability of payment in full. This indicates the

elderly are making more visits than the younger patients, but as discussed previously, the mean number of visits is about equal for both payment and non-payment in full. Further, although the elderly may be making more visits, the number of claims submitted is still statistically insignificant within the model.

Non-payment in Full

Reported Reasons for Non-payment in Full.

The reasons for non-payment in full, for the sample, are recorded at Table 3. The lack of a fully paid deductible accounts for just over 31 percent (31.33) of those transactions which were not paid in full. Even more limiting is the fact that forty-five percent (45.33) of the not paid in full records will never be paid in full; the policy requires a co-payment. These two factors together account for almost 77 percent (76.66) of the not paid in full transactions.

V. Recommendations and Conclusions

Recommendations

Recommendation 1: Continue a stepwise refinement of the entire Third Party Collection Program. Ensure that with staff turnover, new personnel are indoctrinated into the beneficiary - third party payer identification process. Ensure that identification and collection has a positive incentive attached for the departments involved; otherwise, the process becomes a disincentive. The importance of the program must continually be emphasized to all personnel. The Staff's compliance with established procedures and ideas for enhancements to the program should be solicited.

Recommendation 2: Initiate a follow-up routine other than just a second billing. Perhaps a phone call follow-up to the high volume third party payers could be tested to see if better performance follows. A time and motion study should be conducted if this effect is considered.

Recommendation 3: Discuss bill preparation with the high volume third party payers. If there is a

particular form a payer prefers, determine if it is possible for the facility to bill on that form. If there is a certain procedure that would make it easier, and therefore, probably faster, for a payer to review and pay a claim, do it if at all possible. Perhaps such a phone call could eliminate the need for a second billing or a correctional billing. The goal is to receive the maximum payment upon presentation of the first bill.

Conclusions

The main implication of this study is that certain third party payers are more likely to pay a claim in full than others. The relationships with these payers should be cultivated in an attempt to recoup as much outpatient visit charges as possible.

Future visits/billings may or may not cause the 31 percent deductible-not-met category into payments in full, one cannot tell without knowing the type of policy in each case. In any event, 45 percent will never enter the fully paid category, because the policy requires a copayment. With nearly 77 percent of the not paid in full transactions currently uncollectible

because the patient may not incur an out-of-pocket expense, there is a very limited chance that the current collection rate can be greatly improved.

Although the Third Party Collection Program is operating under regulatory constraints beyond the control of the facility's governing body, every effort must be made to pursue payment in full whenever the opportunity does present itself; every successful recoupment means more money for our beneficiaries' health care needs.

VI. Bibliography

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LIST OF TABLES

Table 1

<u>Descriptive Statistics</u>

Variable <u>Name</u>	Payment <u>in full</u>			Not Pa in ful		Cor	Correlation	
	<u>Mean</u>	<u>SD</u>	1	<u>Mean</u>	SD			
Age	73.415	11.80	4 5	9.640	17.231	L	.422*	
Number of Claims	5.732	6.7	40	5.793	8.840)	004	
	n	= 142	8	<u>n</u>	= 150) %		
Type of Visit								
Radiology	1	.2	8.45		14	9.33	015	
Outpt Cons	sult 1	4	9.86	ė	13	8.67	.021	
Inpt Consu	ult	0	0		1	.67	057	
Establishe	ed Pt 8	34 5	9.15		79 5	2.67	.065	
New Patier	nt 1	.4	9.86	c:	17 1	1.33	024	
Dept of Me	edicine	4	2.82		5	3.33	015	
Emergency	Dept 1	.4	9.86		17 1	1.33	024	
Case Mgt		0	0		2	1.33	081	
Surgery De	ept	0	0		2	1.33	081	

Table 1 (continued)

Descriptive Statistics

Variable Name		yment full	Not Paid in full		Correlation
	<u>n = 142 %</u>		<u>n = 150 %</u>		
<u>Gender</u>					
Male	78	54.93	74	49.33	.056
Female	64	45.07	76	50.67	056
Third Party Pa	yer				
APWU	0	0	2	1.33	081
BC FEP	95	66.90	36	24.00	.431*
BS PERS CARE	0	0	4	2.67	115*
CIGNA 1620	0	0	5	3.33	128*
GEHA	16	11.27	8	5.33	.108
MAIL	5	3.52	34	22.67	281*
OTHER	26	18.31	61	40.67	244*
<u>Patient</u> <u>Category</u>					
Retiree	78	54.93	72	48.00	.069
Retiree Family Mbr	55	38.73	56	37.33	.014
Active Duty Family Mbr	9	6.34	22	14.67	135*
*Critical Value	e (2	tail, .05)	= +/-	.113	

Table 2
Inforential Statistics

Inferential S	tatistics					
<u>Effect</u>	<u>R</u> ²	R ²	df1	df2	<u>F</u>	g
Age	.178	.178	1	290	62.836	.001
Gender	.179	.001	2	289	31.558	.001
Pt Category	.201	.022	4	287	18.075	.001
Visit Code	.221	.020	12	279	6.593	.001
Number of Claims	.223	.002	13	278	6.147	.001
Third Party Payers	.386	.163	19	272	9.010	.001

Table 3

Reasons Reported by Third Party Payer for Nonpayment in Full

(N=150)

Carrier

Reported Reasons	APWU	BC FEP	BS PERS CARE	CIGNA 1620	GEHA	MAIL	ALL OTHERS
Deductible Not Met	0	13	4	1	0	8	21
Copayment Required	0	21	0	4	7	13	23
Excess Policy Charge	0	0	0	0	0	2	3
Medicare Supplemental	0	0	0	0	0	0	4
Services Not Covered	0	0	0	0	0	2	0
Not a Billable Policy	0	0	0	0	0	0	2

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Table 3 (continued)

Reasons Reported by Third Party Payer for Nonpayment in Full

(N=150)

Carrier

Combination Reasons	APWU	BC FEP	BS PERS CARE	CIGNA 1620	GEHA	MAIL	ALL OTHERS
Deductible/ Excess Charge	1	0	0	0	0	2	1
Copayment Req/ Excess Charge	1	0	0	0	1	5	3
Copayment Req/ Deductible	0	2	0	0	2	2	2

LIST OF FIGURES

Figure 1

Sample Superbill

NAVAL MEDICAL CENTER, SAN DIEGO DEPARTMENT OF CARDIO-THORACIC SURGERY

JON: 5DCMA SUPERBILL DESCRIPTION CPT DESCRIPTION DESCRIPTION CPT 4. INPATIENT CONSULTATIONS 8 FNDOSCOPY 1. OFFICE VISIT Bronchoscopy; Diagnostic, (Flexible or 99251 INITIAL New/Est Pt. Minor N-0 S-H-0-W Rigid), w or w/e Call Washing or Brushing 31622 Expanded 99252 Mod Complexity 99754 C-A-N-C-E-L-L-A-T-I-O-N 31625 99255 with Biopsy Detailed 99253 High Complexity 99215 Established, Moderate to High 43202 99261 Esophagus with Biopsy Moderate 99214 ☐ Low to Moderate 99213 FOLLOW-UP, Law Complexity 43200 99263 Esophagus, Diagnostic 99262 | High 99212 Minimal 99211 Moderate 5. CONFIRMATORY CONSULTATIONS 32700 Thoracoscopy 99205 New Patient, High Complexity 32705 99271 Thoracoscopy with Biopsy Mod to High 99204 - Low 99202 New/Est Pt. Minor 9. OTHER PROCEDURES 99272 Detailed 99273 99201 Expanded 99203
Minimal 99275 Debridement: Skin: Partial Thickness 11040 Mod Comp 99024 99274 High Complexity Post Operative Visit 10140 Incision & Drainage-Hematoma B. CRITICAL CARE 2. CONSULTATIONS, OUTPATIENT 10141 Incision & Drainage-Hematoma Complete 99291 99741 First Hou New/Est Patient, Brief 10180 99292 Incision & Drainage (Complex) Each Additional 30 Minutes 99244 99242 Mod Complexity 10180 Post Op Wound Infection, has 7. CASE MANAGEMENT SERVICES 99243 High Complexity 99245 Skin, Full Thickness; Debridement 99361 11041 3. EMERGENCY DEPARTMENT SERVICES Interdisciplinary Team Conference, 30 mm 11042 Skin & Subcutaneous Tissue Approximately 60 Minutes 99285 New/Est Pt, Life Threatening 32000 Telephone Calls, Simple or Brief 99371 Thoracentesis, for Aspreson, Indal/Su 99284 High Seventy Tube Thoracostomy w/ w/o Water Seal Intermediate 99372 99283 Moderate Severity 99373 Other/Specify: Complex or Lengthy 99282 Low to Moderate Seventy 99281 Minor ICD-9 DIAGNOSIS ICD-9 ZIRONDAIG KCD-9 530.1 Esophagitis (GER) 212.2 Benign Neopiasm, Traches 513.0 Abscess of Lung 230.1 Esophagus, Carcinoma in Situ Benign Neoplasm, Bronchus and Lung 212.3 513.1 Abscess of Mediastinum Esophagus, UNSP Disorders 530.9 Abdominal Agric Aneurysm, Not Ruptured | 441.9 212.4 530.8 Esophagus, Other Specified Disorders 212.5 Abdominal Aortic Aneurysm, Ruptured 441.5 Mediastinum 530.5 212.6 Esophagus, Dyskinesia 530.0 Achaiasia and Cardiospasm Thymus 530.6 212.7 Esophagus, Diverticulum, Acquired Heart 411.81 Coronary Occiusion we Myocarda Marcoon 150.0 Esophagus, Cervical, Malignant Neoplasm 494 Acute Myocardial Infarction, UNSP 410.90 Bronchiectasis 150.1 Thoracic Esophagus 231.1 420.99 Carcinoma In Situ, Traches Acute Pencarditis, Other 150.2 Abdominal Esophagus 231.2 421.0 Bronchus and Lung Acute/Subscute Bacterial Endocarditis 150.3 Upper Third 429.2 Cardiovascular Disease, UNSP Acute/Subscute Endocarditis, UNSP 421.9 Middle Third 150.4 786.6 414.1 Chest Wall Mass Angurysm of Heart 150.5 Lower Third 496 Chronic Airway Obstruction, NEC 417.1 Angurysm of Pulmonary Artery 150.9 HINSP 747.0 747 4 Parent Ductus Artenosus Anomaties of Great Veins 530.4 Coarctation of Aorta (Preductal/Postductal) 747.10 Esophagus Perforation 444 530.2 Esophagus Ulcer Artenovenous Fistula / Pulmonary Vessels 417.0 Coronary Atheroscierosis 414.0 Excessive/Abnormal Scarring 709.2 451.11 440.0 Deep Vein Thrombosis Atheroscierosis of Aorta 530.7 519.4 Mailory-Weiss Syndrome 441.0 Diaphragm Disorders Aorta, Dissecting Aneurysm 423.0 518.1 Hemopencardium 441.1 Emphysema, Interstitial Thoracic Aneurysm Ruptured 176.4 492.0 Kanosi's Sarcoma, Lung Emphysematous Bleb 141 2 Thoracic Anaurysm w/o Rupture 701.4 Keloid Scar 510.0 Empyema, w/ Fistula 424.1 Aortic Valve Disorders Lung Involvement in Other Diseases 510.9 w/o Fistula Aprilc/Mitral Valves Multiple Involvement 396.8 517.8 Classified Elsewhere Code 1st Und Endocardial Cushion Defects UNSP Type 745.60 Aortic/Mitral Valve Disease, UNSP 396.9 Specify 238.8 745.61 Lymph Node Mass (Benigh) Ostium Primum Defect 396.0 Apriic/Mitrai Valve Stenosis _ Thorax | 171.4 Malignant Neoplasm 395.9 UNSP Detect of Septal Closure 745.9 Aortic Valve Disease, Other/UNSP Malignant Neoplasm one-rouse see. Thorax | 195.1 Endocarditis in Diseases Classifed Es 501 Aspestosis Code 1st Underlying Disease Specify: Matignant Neopiasm, Trachea 747 22 Atresia & Stenosis of Aorta Completed Insurance Questionnaire

Yes

No | DATE/TIME: ADDRESSOGRAPH Insurance Tyes TNo SIGNED: PHYSICIAN/PROVIDER

Active Duty I Yes I No

APPENDIX - Definitions

Third Party Payers

ALL OTHERS - Includes any carrier not specifically named; the highest volume carriers were named individually and the others combined into a category.

APWU - American Postal Workers' Union

BC FEP - Blue Cross Federal Employee Program

BS PERS CARE - Blue Shield Pers Care

CIGNA 1620 - Cigna Health Care, "1620" is the designation the local collection office uses to differentiate to which address a particular Cigna claim is mailed

GEHA - Government Employees' Health Care Association

MAIL - Mail Handlers' Benefit Plan

<u>Visit Type Codes</u>

Case Management - current procedural terminology codes 99361, 99362, 99371, 99372, and 99373

Dept of Medicine - Any current procedural terminology code from 90701 to 99199 (exclusive of anesthesiology)

Emergency Dept Services - current procedural terminology codes from 99281 to 99285

Inpatient Consultation - current procedural terminology codes from 99251 to 99255 and 99261 to 99263

Office Visit for Established Patient - current procedural terminology codes from 99211 to 99215

Office Visit for New Patient - current procedural terminology codes from 99201 to 99205 and 99024

Outpatient Consultation - current procedural terminology codes from 99241 to 99245

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Radiology Procedure - Any current procedural terminology code from 70010 to 79999.

Surgery Department - Any current procedural terminology code from 10040 to 69979